

What is claimed is:

1. An image display system comprising:

a host for executing an application; and

a display connected to the host, the display displaying an image, wherein said host transfers undeveloped image data to the display when the host requests the display to display the image, and said display includes a panel memory for developing the image, develops the image in the panel memory based on the image data transferred from said host, and displays the image on its panel, which is developed in the panel memory.

2. The image display system according to claim 1, wherein said display refreshes said panel based on the image developed in said panel memory.

3. The image display system according to claim 1, wherein said host transfers image data showing a first resolution to said display based on an output from an application executed with the first resolution, and said display converts said transferred image data having the first resolution to that having a second resolution higher than the first resolution, and develops said image data for said panel memory.

4. The image display system according to claim 1, wherein

said host transfers compressed image data to said display as it is compressed, and said display expands said compressed image data transferred thereto, and develops said expanded image data for said panel memory.

5

5. An image display system comprising:

a plurality of system devices for executing the same application; and

10 a display device having panel controlling means for dividing a display area into a plurality of areas and controlling driving of the divided areas, wherein the plurality of system devices are connected to respective panel control means provided in said display device, and output first control signals for a synchronization with
15 said display device to the respective panel control means; and said panel control means in said display device outputs a second control signals for a synchronization with said display device to the system devices, based on the first control signals outputted from said plurality of system
20 devices.

6. The image display system according to claim 5, wherein said first control signals outputted from said system devices are job information which can be processed in a
25 next frame by the system devices, and said second control signals, which are outputted from said panel control means,

are information indicating a job which shows the lowest processing speed detected from said job information, which is outputted from said system devices.

5 7. The image display system according to claim 5, wherein said system device determines a job to be executed based on the second control signal outputted from said panel control means, and outputs image data to request a display of said display means by executing the job.

10

8. An image display system comprising:

a host for executing a plurality of applications showing different display characteristics and data quantities, which are required;

15 a display for displaying an image; and

a digital interface for transferring image data from said host to said display, wherein said digital interface changes a transfer format depending on an application executed by said host, and transfers image data to said display, and said display develops said image data transferred via said digital interface in a panel memory for developing, and then displays an image on a panel.

9. The image display system according to claim 8, wherein
25 said digital interface transfers said image data by a packet, and transfers said image data by specifying a data

transfer mode in the packet, and said display develops said image data in said panel memory based on said data transfer mode specified.

5 10. A host device comprising:

executing means for executing a plurality of applications having different display characteristics and data quantities, which are required;

10 window managing means for managing a window ID defined for a window that is an area which makes definite sense in an image space, of which said application is conscious; and

15 image data transfer means for adding the window ID managed by said window managing means to undeveloped image data, for which said application requests a display, and transferring the undeveloped image data.

11. The host device according to claim 10, wherein said image data transfer means transfers said image data in the form of a packet, and transfers said image data after
20 changing a transfer style of the image data depending on the application.

12. A host device comprising:

25 image transfer means for transferring image data to a display connected thereto; and

control means for supplying image data to said data

transfer means based on an executed application of a still picture and an executed application of a moving picture, wherein said control means supplies the image data regardless of refresh timing required for said display with respect to the application of said still picture, and supplies the image data in synchronization with refresh timing required for said display with respect to the application of said moving picture.

13. An image display device comprising:

a panel for displaying an image;

image data receiving means for receiving undeveloped image data from a host device which executes an application;

a panel memory for developing said image data received from said image data receiving means; and

panel control means for developing image data for said panel memory and writing a developed image for said panel.

14. The image display device according to claim 13, wherein said image data receiving means receives a plurality of undeveloped image data showing different display characteristics and data quantities, which are required, and said panel control means develops said plurality of undeveloped image data, thus forming a display screen.

15. The image display device according to claim 13, wherein said panel control means executes refreshing for said panel based on the image data developed in said panel memory.

5 16. The image display device according to claim 13, wherein said image data receiving means receives image data having a first resolution, and said panel control means scales said image data to a second resolution different from said first resolution, and develops said image data for said
10 panel memory.

17. An image display device which is connected to a plurality of system devices for executing the same job, and displays an image based on image data transferred from the
15 plurality of system devices, comprising:

a display section for displaying the image, either as panels divided into a plurality of display areas or as one panel obtained by collecting a plurality of display panels;
and

20 one or more panel control means for controlling an image display of said display section, wherein said panel control means receives a control signal concerning a job from said plurality of system devices, and transmits a control signal used for achieving synchronization of the
25 system devices to said plurality of system devices.

18. The image display device according to claim 17, wherein said plurality of panel control means are provided, each of which corresponds to corresponding one of said divided panels in said display section or to corresponding one of said display panels constituting the plurality of display panels as one panel, and an internal bus for allowing other panel control means to recognize said control signal received by specified control means is further provided.

19. The image display device according to claim 18, wherein said control signal received by said control means is a job number executable in a next frame by said system device, and said control means transmits a control signal including a job number to be executed in the next frame by said system device, based on the job number on said bus.

20. An image display device comprising:

a panel for displaying an image;

image data receiving means for receiving undeveloped

image data from a host side which executes a plurality of applications;

a panel memory for developing said image data received from said image data receiving means; and

panel control means for developing image data for said panel memory and performing a color adjustment for each image data, each image data transferred by one of said

different applications, thus writing an image to said panel.

21. An image display device comprising:

5 a panel for displaying an image;

image data receiving means for receiving color image data of the first number of bits and monochrome image data of the second number of bits different from the first number of bits from a host side;

10 a panel memory for developing said image data received from said image data receiving means; and

panel control means for developing image data for said panel memory, wherein said panel control means develops said color image data and said monochrome image data, which
15 are received from said image data receiving means, in said panel memory, the color image data and said monochrome image data being developed in different data formats.

22. The image display device according to claim 21, wherein
20 said panel control means writes identification bits for discriminating between said color image data and said monochrome image data, and executes a developing processing based on the identification bits.

23. An image display method for displaying an image on a display connected to a host, based on a signal from the

host which executes an application, comprising the steps of:

transferring undeveloped image data for an image display from said host to said display via a digital interface;

developing said transferred image data by said display itself, for a memory of said display; and

displaying an image developed in said memory on said display.

24. The image display method according to claim 23, wherein refreshing of said display is performed based on said image developed in said memory of said display.

25. An image display method for displaying an image on a display connected a host, based on a signal from the host which executes an application, comprising the steps of:

transferring image data showing a first resolution executed by said application from said host to said display;

scaling the image data showing the first resolution by said display, which is transferred from said host;

developing an image with a second resolution different from said first resolution; and

outputting the image to a panel of said display so as to display the image on the panel.

26. The image display method according to claim 25,

wherein said display is a multi-panel obtained by tiling a plurality of panels or a high-resolution panel;

5 and

scaling of said image data is an enlarged display.

Table 1. Demographic characteristics of the study population	
Age (years)	65.0 ± 1.5
Gender (male/female)	10/10
Education (years)	12.0 ± 1.0
Occupation	Retired
Marital status	Married
Family size	3.0 ± 1.0
Income (USD/month)	1500.0 ± 200.0
Health status	Good
Smoking status	Non-smoker
Alcohol consumption	None
Comorbidities	None
Medication	None
Physical activity	Low
Stress level	Low
Sleep quality	Good
Dietary habits	Healthy
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low
Exercise location	Low
Exercise time	Low
Exercise frequency	Low
Exercise intensity	Low
Exercise duration	Low
Exercise type	Low